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09/944,589	09/04/2001	Takayuki Norimatsu	Q66012	1652

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EXAMINER

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**GROUP 3600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/944,589  
Filing Date: September 04, 2001  
Appellant(s): NORIMATSU, TAKAYUKI

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Michael A. Bush  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 29, 2005 appealing from the Office action mailed March 28, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

(A) Claims 1-12 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, and

(B) alternatively, claims 1-12 under 35 U.S.C. 103(a) as being unpatentable over Alff (US 5,622,437) in view of Appellant's prior art admission (filed 3/18/04) based on the handbook entitled "Knack of Selecting Magnetic Material."

In the Final Rejection filed December 20, 2004, it was held that the disclosure failed to meet the enablement requirement of 35 U.S.C. 112, first paragraph. Specifically, the claims contained subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or which it is most nearly connected, to make and/or use the invention.

The instant disclosure defines an encoder formed as an elastic member made of a base material mixed with a powder of magnetic material, wherein the claimed single pitch deviation and the claimed magnetic flux density of the encoder is obtained by selecting a material for the base rubber material, a material for the powder of the magnetic material, and the mixing ratio thereof. It is not entirely clear applicant had possession of the claimed device because the disclosure fails to clearly identify a specific example of the materials and mixing ratios thereof in forming the encoder so as to obtain the claimed single pitch deviation and magnetic flux density. Accordingly, one in the art could not produce the claimed device without undue experimentation.

Examiner notes the encoder can be made of a heat resistant nitrile rubber, acrylic rubber, or fluorine containing rubber, mixed with a powder of ferrite (see first full paragraph of page 11 of the disclosure), however applicant has not provided a specific example of materials and mixing ratios thereof such that one in the art could produce the claimed device without undue experimentation. The mere suggestion that an encoder can be formed with the claimed properties by mixing a number of recited materials is not sufficient because, for example, each combination of materials used in making the encoder may have a specific mixing ratio which would be difficult to reproduce by one in the art. Since applicant has not clearly disclosed the mixing ratio and materials needed in obtaining the claimed encoder, it would be difficult for one in the art to make the claimed encoder without undue experimentation.

In an attempted to overcome the enablement rejection above, Applicant filed a Declaration on March 18, 2004. In the Declaration, applicant stated that one of ordinary skill in the art would be able to achieve an encoder having a mixing ratio of approximately 85-90% wt% magnetic material, and 10-15% wt% elastic member without undue experimentation given the teaching of a prior art Handbook entitled "Knack of Selecting Magnetic Material." In view of applicant's admission of the prior art, an alternative rejection was given based on 35 U.S.C. 103.

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In the alternative rejection, it was found to be obvious to make a known encoder assembly from the materials disclosed in the Handbook. Specifically, the prior art to Alff discloses a wheel bearing assembly comprising: a sealing member for sealing an annular space between inner and outer race members and a magnetized encoder (7) mounted to the inner member. Referring to column 2, lines 27-36, Alff discloses that the sealing device with an integrated encoding device is described in U.S. Patent 5,431,413. Accordingly, the magnetized encoder is formed of elastomer material loaded with magnetic particles.

Alff does not disclose the encoder having the claimed properties when subjected to the claimed thermal endurance test, but it was known to form a magnetic member with the disclosed mixing ratios. Applicant's declaration under Rule 132 (filed March 18, 2004) states that one of ordinary skill in the art would be able to achieve an encoder having a mixing ratio of approximately 85-90% wt% magnetic material, and 10-15% wt% elastic member. Accordingly, the known mixing ratio of magnetic material with elastic material inherently produces the claimed single pitch deviation and magnetic flux density. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the encoder member of Alff with a mixing ratio of approximately 85-90% wt% magnetic material and 10-15% wt% elastic material, in view of applicant's prior art admission based on the handbook entitled "Knack of Selecting Magnetic Material," motivation being to form a magnetic member having high dimensional precision.

### **(10) Response to Argument**

Referring to section 2164.01(a) of the MPEP, it is understood that there are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to: (A) The breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

With respect to the factors above (A-H), it is held that the original disclosure does not contain a written description of the invention, and the manner and process of making and using it, in such full clear, concise, and exacting terms as to enable any person skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and use the invention. The claims are extremely broad in scope because they attempt to define an encoder based on a result of a thermal endurance test and not on its specific structure or its material from which it is made. Specifically, it appears that applicant has listed a number of materials that could be combined to form an encoder having the claimed thermal endurance characteristics, but, for example, it is not clear what mixing ratio was used in combining the listed materials in making the claimed

device or its manufacturing steps used to combine the materials. For example, does the encoder require more than one type of rubber to be mixed with the magnetic material to achieve the claimed results? Further, does the manufacturing steps determine the characteristics of the encoder, such as bonding temperature or processing time. The disclosure appears to suggest only the mixing of a number of materials produces the claimed endurance results. Since the original disclosure does not provide sufficient guidance with respect to the making of the encoder, including an example of the mixing ratios of the disclosed materials, a skilled person in the art would not be able to produce the claimed device without undue experimentation.

It is acknowledged the Handbook submitted by applicant describes a known bonded magnet formed by mixing a magnetic material with a bond as rubber, contained within the range of 2-15% wt%. Further, applicant's declaration is acknowledged that the bonded magnet disclosed in the Handbook is "similar to the rubber magnet forming the magnetized encoder of the subject application" (Declaration, item 3). Even though the claimed encoder may be similar to the bonded magnet of the Handbook because they incorporate non-magnetic material, it is held that one skilled in the art would not look to the handbook given applicant's disclosure to obtain mixing ratios. For example, one would not look to the Handbook for mixing ratios because the translated portion (lines 7-13 of page 45) of the Handbook does not teach a wheel bearing assembly, or an encoder having a series of magnetic poles of opposite polarities. The mere



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suggestion by the Handbook that a rubber can be mixed with a magnetic material at a predetermined ratio does not make the instant disclosure enabling.

Accordingly, it is submitted there is sufficient reasoning by the Examiner to cast doubt on the accuracy of the claims made in the Declaration.

In the event it one in the art would look to the Handbook for mixing ratios in making applicant's encoder, an alternative obvious type rejection is given.

Applicant argues the obvious type rejection failed to provide evidence that the individual elements existed in the prior art and failed to provide evidence of a motivation to combine the prior art teachings of Alff and the Handbook. In response to this argument, Alff teaches an encoder having the same structure as defined by the independent claims of the instant application, except for the limitations defining the characteristics of the encoder when subjected to the claimed thermal endurance test. It was known to form a magnetic member with the disclosed mixing ratios (see Applicant's declaration under Rule 132 filed March 18, 2004). Accordingly, the known mixing ratio of magnetic material with elastic material inherently produces the claimed single pitch deviation and magnetic flux density. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the encoder member of Alff with a mixing ratio of approximately 85-90% wt% magnetic material and 10-15% wt% elastic material, in view of applicant's prior art admission based on the handbook

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entitled "Knack of Selecting Magnetic Material," motivation being to form a magnetic member having high dimensional precision.

With respect to the argument neither Hajzler nor Alff disclose an elastic member having a series of alternating magnetic poles, it is understood that an encoder used to detect a rotational movement with a magnetic material must incorporate an alternating magnetic pole of opposite polarities. For example, see cited reference JP 6-281018 to Hajzler. Accordingly, the term encoder is understood to inherently meet the claim limitation. It is noted claim 12 does not recite this feature.

It is acknowledged neither Hajzler nor Alff disclose the claimed thermal endurance test, however the known mixing ratio of magnetic material with elastic material, as disclosed by the Handbook, inherently produces the claimed single pitch deviation and magnetic flux density.

Referring to the partial translation (lines 7-13 of page 45) of the Handbook, it is understood the bonded magnet can be made with high dimensional precision. Accordingly, the Handbook clearly provides the motivation for making the encoder of Alff with the disclosed mixing ratios of the Handbook, motivation being to provide an encoder having high dimensional precision.

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In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In view of the support provide herein, Examiner submits there is sufficient reasoning to maintain at least one of the non-enabling rejection or the obvious type rejection set forth in the Final Rejection filed on March 29, 2005.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

William C. Joyce

 11/14/05

Conferees:

TRH 

CAM 